AMENDMENTS TO THE CLAIMS:

Claims 1-2. (Withdrawn)

Claim 3. (Currently amended): A method for the synthesis of a lactone of polysaccharide carboxylic acids which comprises (i) providing the free acid form of the polysaccharide as a finely-powdered, anhydrous carboxylic acid with minimal sodium and potassium carboxylate content; (ii) lactonizing said polysaccharide by thermal dehydration for a period greater than five hours in an anhydrous non-nucleophilic solvent; and (iii) collecting the resulting lactone product.

Claim 4. (Cancelled)

Claim 5. (Original): A method according to Claim 3 which further comprises conducting said lactonization in a refluxing media selected from the group consisting of xylene, toluene, diglyme, and acetonitrile.

Claim 6. (Currently amended): A method according to Claim 5 wherein the polysaccharide carboxylic acid is ~~carboxymethly~~ carboxymethyl-cellulose and lactonizing consists of:

(i) suspending the carboxymethyl cellulose in anhydrous diglyme~~,~~;

(ii) heating the suspension to about 150°C for about 24 hours~~,~~;

(iii) removing the diglyme solvent~~,~~; and

(iv) collecting the lactone.

Claim 7. (Currently amended): A method according to Claim 5, wherein the polysaccharide carboxylic acid is pectin acid and lactonizing consists of:

(v) suspending the pectin in anhydrous toluene~~,~~;

(vi) heating the suspension for about 24 hours~~,~~;

(vii) removing the toluene solvent~~,~~ ; and

(iv) collecting the lactone.

Claim 8. (Currently amended): A method according to Claim 5, wherein the polysaccharide carboxylic acid is ~~carboxymethly~~ carboxymethyl -starch and lactonizing consists of:

~~(i)~~ (i) converting the starch to the free acid~~,~~;

(ii) suspending the free acid in anhydrous diglyme~~,~~;

(iii) heating the suspension~~,~~;

(iv) removing the diglyme solvent ~~,~~; and

(v) collecting the lactone.

Claim 9. (Currently amended): A polysaccharide carboxylic acid lactone product made in accordance ~~to~~ with -the method of Claim 3.

Claims 10.-14. (Withdrawn)

Claim 15. (New): A method according to Claim 3, in which the polysaccharide carboxylic acid is selected from the group consisting of carboxymethylcellulose;

carboxymethyl alpha-dextran; carboxymethyl beta-dextran; carboxymethyl starch; O,N-dicarboxymethyl chitosan; O-carboxymethyl chitosan; N-carboxymethyl chitosan, carboxy-starch; and pectin.